Formalizing casual games: A study based on game designers' professional knowledge

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ABSTRACT
While the casual game market is expanding, there are increasingly few research projects and explorations about the definition of this game style. Existing definitions are contradictory and some areas, like casual game design practice, remain under-explored. Using game designers' professional knowledge, this study aims to provide a new understanding and perspective towards definitions of casual games. Results contradict previous studies that have advocated for a radical shift in casual game design values. Outcomes indicate that certain traditional concepts like challenge are still valuable in understanding casual games. The discussion illustrates how different traditional concepts fit with the casual game trend and how some recent assertions about casual game definitions might be deceptive for game designers.

Keywords
Game design, casual games, game designer, reflective practitioner, professional knowledge, challenge, progression, gameplay loops.

INTRODUCTION
In the past few years, casual games have appeared as one of the major trends in the video game landscape. They eclipse the video game stereotype of shooting games and the male teen player, and reintroduce games as accessible for all audiences.

The casual game phenomenon is widely acknowledged in the game design profession, indicated by the new Casual Games Association and the Casual Games Special Interest Group at the International Game Developers Association (IGDA). In 2011, the Entertainment Software Association (ESA) even introduced "casual games" as a category in their annual report about the video game industry. The report shows that casual games played on personal computers represent 20.6% of best-sellers, which is a higher ranking than shooter games (Entertainment Software Association 2012). The casual market is in constant expansion, and appears dynamic and innovative (Fortugno 2008, Kuittinen et al. 2007, Casual Games Association 2007, 2012). For example, the game *Angry Bird* reached 1 billion downloads in 2012. Ubisoft CEO, Yves Guillemot, declared that "[i]n

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the long term there's no reason why the casual would not overcome the hardcore business"(Weber 2011).

However, casual game phenomenon is not given enough consideration in game culture. We do not have a satisfactory definition of the term "casual game". The IGDA acknowledged this issue in 2006, but has not succeeded in resolving the problem. The official webpage of the special interest group still declares: "What is a casual game? There is no single answer to this." (IGDA 2006-2013). Researchers are aware of the problem too, as stated in a study from Tampere University in Finland: "it appears that there is no consensus as to what 'casual' exactly means when people are talking about games that are labeled as somehow 'casual' " (Kuittinen et al. 2007, 105).
Some authors suggested that the term "casual" might even be inappropriate (Bogost 2007, Dillon 2005), but Kuittinen et al. (2007) advocate for its use:

> We feel that although "casual" can be confusing, there is no real need to replace the term. Since the "casual phenomenon" seems to be more complex and more extensive than previously understood, a more accurate understanding of the phenomenon may yield more fertile results in game design and research (Kuittinen et al. 2007, 108).

Studies tend to concentrate on the economic aspects of casual games (Casual Games Association 2007, Entertainment Software Association 2012, Nielsen 2009). Given this focus, game culture and game design are often overlooked (Wohn 2011). Consalvo stated: "Scholarly attention to game culture has mostly focused on games that cater to gamers that the literature has deemed 'hardcore,' 'heavy' or at least 'mainstream,' even if we don't all agree on or approve of those identifying terms" (Consalvo 2009, 1). In this context, the goal of this present study is to increase knowledge about the nature of casual games. The study begins by exploring contradictions in current casual game definitions. Next, the author's original research using game designers' professional knowledge to understand casual games is examined. Finally, study outcomes are presented and discussed.

Contradictions in existing definitions

To understand why casual games are still undefined, the author conducted a review of work on the subject. This exploration revealed professional opinions about casual games (Tams 2006, Sheffield 2008, Kapalka 2006), and a wide collection of research papers (Bosser and Nakatsu 2006, Salen 2007, Fortugno 2008, Consalvo 2009, Venturelli 2009, Russoniello, O'Brien, and Parks 2009, Harrigan, Collins, and Dixon 2010, Wohn 2011). However, few studies identify defining casual games as their main goal (Paavilainen et al. 2009, Sotamaa and Karppi 2010, Juul 2009, Bogost 2007, Trefry 2010). A research group at Tampere University conducted two interesting projects. The *GameSpace* project (Paavilainen et al. 2009) started in 2006, and focused on casual multiplayer mobile games. After it was completed in 2008, the research group began the *Game as services* project (Sotamaa and Karppi 2010), which ended in 2010. During this period, Jesper's Juul 2009 book: *A Casual Revolution, Reinventing Video Games and Their Players* was another important milestone in casual game studies. By exploring these visions of casual games, the author noticed five points where studies or professional opinions oppose. These include the place of casual games in game culture, the importance of challenge, difficulty, length of play session and fiction.

The place of casual games in game culture has been approached from two different orientations. For Juul, "the casual revolution contains a new way for players and

games to engage." (Juul 2009, 22). Even if some of the very first video games were targeted at a large audience, the dominating period of hardcore gaming introduces a rupture; casual games can be understood as new era and birth of a new group of players (Juul 2009). In contrast, Kultima argues that casual games are not a "genuinely new phenomenon", but instead a "normalization of digital play" (Kultima 2009, 58). Trefry also suggests that casual games have undergone a progressive evolution. He shows how *Windows Solitaire* (Microsoft 1990), a game from the 90s, introduced the movement that expanded in the 2000s, and is now blooming. Though Juul's vision may be more strongly rooted in video game culture and Kultima and Trefry's understandings are much wider, both seem relevant.

Concerning challenge, the very definition of the term is contested (Sicart 2008), but the importance of the notion is not. Authors agree that challenge has a central role in a video game (Salen and Zimmerman 2003, Sweetser and Wyeth 2005, Csikszentmihalyi 1991). However, some question the need for challenge in casual games: "why do games need to be highly challenging?" (Kultima 2009, 65). This questioning is not shared by all scholars; Juul maintains the traditional vision, stressing that "casual players often enjoy being challenged" (Juul 2009, 40). For him, a casual game without challenge would be terribly boring. Beyond challenge, what other characteristics make casual games interesting? Kultima hints at other factors, but do not provide any well-defined alternatives.

The difficulty of casual games is another point of contention between Juul and Kultima. Juul affirms that a casual game can be difficult. To illustrate this need for difficulty, he reminds us Eric Zimmerman's comment about his game, *Shopmania (GameLab 2006)*: "you can play forever and not really lose, and the essential tension and challenge of a good game are lost" (Juul, 2009, p. 39). Juul further elaborates by explaining that: "contrary to the stereotype, many players of casual games actively enjoy difficult games" (Juul 2009, 40). However, punishment is not as tough as it has been in previous games. If the player fails, there is no need to re-play a large portion of the game. Moreover, mechanisms like random distribution prevent players from endlessly repeating the same actions. On the other hand, Jason Kapalka (from Popcap Games) proposed this famous rule: "No casual game has ever failed for being too easy" (Kapalka 2006). Kultima (2009) also advocates for "error-forgiving" games. Gregory Trefry affirms this argument by explaining that "Players need to be able to quickly reach proficiency" (Trefry 2010, 1). Ian Bogost, who proposed that "easy to learn, hard to master" games are not casual, appears to share the same belief. Difficulty is intimately linked with challenge, punishment and the learning curve. It is tricky to understand what design solutions are associated with difficulty. Video game literature indicates that increasing difficulty makes a game challenging (Aponte, Levieux, and Natkin 2009). Thus, having difficulty in casual games seems appropriate, but once again, Kultima (2009) suggests another path.

Regarding length of play session, all authors appear to recognize the importance of providing short play sessions (Kuittinen et al. 2007, Tams 2006, Sheffield 2008, Juul 2009, Kultima 2009, Bogost 2007). However, definitions of short play session are quite different among researchers and professionals. For Tams and Meretzky, a casual game must be addictive and highly replayable. Though play sessions are short, the design enables the player to re-start the game again and again. In contrast, Bogost (2011) compares casual games with casual sex. He proposes that casual games should not be re-playable and, instead, should explore "the pleasures of the fleeting, the transitory, the impermanent" (Bogost 2011, 102). *Interruptibility,* proposed by Juul (2009), is a third

vision. The design does not need to be segmented or repeatable, but the player should be able to easily interrupt the game without any serious consequences and return to the session later. Further, Kuittinen et al. (2007) point out that quantitative data indicates the need for a different approach. Games on mobile platforms give the impression of short play sessions, but surveys show that sessions may be longer than anticipated (Kuittinen et al. 2007).

Finally, all authors have similar perspectives towards fiction. Fiction, themes or settings in casual games must be cheerful, and sexuality or violence should be excluded. Since "Game concepts borrow familiar content and themes from life" (Trefry 2010, 1), content should "[match] the norms of the players social context" (Kultima 2009, 61). This argument seems to induce that sex and violence are absent from player's life, which is unlikely. Moreover, numerous casual games do not follow this rule. *Mystery Case File: Return to Ravenhearst* (Big Fish Studios 2008) is one the most popular and iconic casual games (Consalvo 2009), and takes place in an unfamiliar and creepy environment. Further, the best casual games of 2012 ranked on JayisGame.com (a popular casual games review website), show that violence is a common theme. The *point and click* adventure games are described using terms like "macabre", "horror", "malevolent" and "murder" (Jayisgames.com 2013). Though these themes are not common in everyday life, they are present in games and bring violent events to players' attention.

This comparison exercise reveals two main problems in casual games definitions: first, definitions are often discordant. Second, the theories do not match with actual video games. These two factors necessitate further research about casual games. But how? Which paths are more promising to unveil new elements or untangle current contested notions? The next section offers a reflection on those questions.

Encompassing the casual game phenomenon: A holistic revolution

The author explored the factors used to encompass casual game, and results reveal a very interesting evolution: first attempts were focused on specific aspect of the casual game phenomenon, but definitions become progressively more complex. The focus shifted from a fragmented vision centred on gameplay, to a holistic one, including game culture and design values.

Kuittinen, Kultima, Niemel and Paavilainen conducted a meticulous review of definitions of casual games in their 2007 article *Casual Games Discussion*. They classified definitions along three axes: games, players and playing (Kuittinen et al. 2007). The authors are first to critique of this fragmented system. They propose that casual games should be understood as experiential products and they prompt questioning about the importance of a holistic vision of games.

In 2009, Juul published *A Casual Revolution, Reinventing Video Games and Their Players,* a seminal work on casual games. Early in the book, he argues for a more unified understanding of casual games, and furthers the statement made by the *GameSpace* research group: " *In my opinion the idea of having to choose between players and game is a dead end*" (Juul 2009, 9). He provides a definition of casual games based on the video game duty cycle, where all aspects link games with the casual player's life and expectations. At the end of his definition, Juul insists on flexibility. Through his work, flexibility became the newest factor for evaluating and understanding a casual game. It provides both a game-centric and player-centric point a view: "The better solution is to see how a game can be more or less flexible toward being played in different ways, and a

player can be more or less flexible toward what a game asks of the player." (Juul 2009, 53).

Kultima, who published the paper Casual Game Design Values in 2009, furthered this shift from intrinsic game characteristics to global design values. She maintains the holistic understanding of casual games and argues that "casual games are a much wider entity than usually realized." (Kultima 2009, 64). Kultima analyzed dozens of games, and identified four design values: acceptability (of the content), accessibility, simplicity and, like Juul, flexibility. With these values, she questions the traditional and well accepted notions of challenge, immersion or difficulty in casual games (Kultima 2009, 65). Shortly following her study of design values, Kultima collaborated with Stenros to propose a theoretical framework: the *Expanded Game Experience* (EGE) *model* (Kultima and Stenros 2010). Once again, the game-centric view and singular focus of most game design models is criticized. The EGE model proposes an experience that begins well before the player start playing, and does not stop at the end of a session. The model includes six steps, as follows: information retrieval, enabling, preparation, gameplay, afterplay and disposal. Together, these steps encompass a large and meaningful way of understanding a player's experience. This study is unique because of the place accorded to the game design; the design process is central to the model. The authors argue that this model is useful for designers: "The model also helps game designers understand the wide variety of game-related experiences that a gamer can have" (Kultima and Stenros 2010, 72). Together these factors establish a holistic view of play and design. It leads to a new field of research about the role of the game designer in player experience.

Designers' professional knowledge

These initial studies about casual games indicate how quickly the vision of casual game changed. Research must continue and further investigate the design practice. Though Kultima and Stenros stated that "The EGE model frames the game design process in terms of different actors working on different aspects of the entire game experience" (Kultima and Stenros 2010, 72), the model is centered on players (their motivations, their resources, etc.), and provides a simplistic vision of the designer and of the design activity. According to Kultima and Stenros, the *EGE* model proposes a comprehensive vision. Therefore, the lack of details about the design process is understandable. However, certain problems indicated by Kultima and Stenros remain important. They argue that the design process must be explored to inform the transformation of play, and add that "the models used to map the design process lag behind." (Kultima and Stenros 2010, 66). Further, the *EGE* model is not categorically a model of the design process: it is closer to a duty cycle, and is important to help avoid forgetting a step in the design process. It is a tool *for* designers, but we can still improve our knowledge *about* designers' practices. Understanding casual game design practice appears to be a promising subject for this research, and will help continue to expand understanding of casual games.

A framework is needed to begin studying design practices, and complement casual game design research. However, finding such a framework is not an easy task. Kuittinen and Holopainen explain that texts about game design do not provide theory to understand design practice: "Judging from the selection of the game design literature we analysed, game design is heavily governed by the object of the design, games. Although this may appear like an overly obvious statement, it carries with itself the connotation that the activity called design, is left to too little attention." (Kuittinen and Holopainen 2009). Conversely, they propose several theoretical frameworks to understand design activity (Simon 1996 [1969], Schön 1986) and design processes (Lawson 2006, Löwgren and

Stolterman 2004). Schön's model of the reflexive practitioner was selected for this present study because of the concept of "professional knowledge". According to Schön, there is knowledge hidden in practice. Wisdom is gained through practice, and professionals have knowledge that allows them to act in complex and unclear situations. "Know-how" lies in professionals' actions. This knowledge can be a solid foundation for new theory, and Schön advocates for an epistemology of practice. Schön's model of the reflexive practitioner defines practice as "a reflective conversation with a unique and uncertain situation " (Schön, 1983, p. 130). The presence of "constants" (Schön 1983, 270) is particularly important in this model. Constants can be understood as the steady fundamental principles of a profession, and examples include the practitioner's favorite design solutions, the appreciative value system, or theories used to conduct a reflexive practice (Schön 1983). By investigating the professional knowledge of casual game designers[1], this study aims to clarify the definition of casual games.

METHODOLOGY

How does a researcher gather data from the tacit knowledge of professionals? As Schön himself stated, the researcher "must somehow gain an inside view of the experience of practice" (Schön 1983, 323). Several studies about the tacit knowledge of designers have been conducted and present some possible approaches, including direct observation of professional at work (Schön 1983) (Wood, Rust, and Horne 2009), or action research (Schön 1983). Unfortunately, these approaches would be difficult to implement in a video game company, where philosophy of privacy and secrecy is dominant. As a result, the author needed to use a less intrusive method to achieve research goals. Human-Computer Interaction (HCI) research shows that practitioner interviews can be fruitful, if conducted as a narrative of practice: "In some respects, descriptions of authors' design processes through descriptive anecdotes, stories or slightly more formal case studies have together contributed the most to giving insights into design practice in HCI" (Goodman, Stolterman, and Wakkary 2011, 1066).

Interviews are an easy and efficient way to collect professional knowledge. The author then choose to follow a qualitative methodology inspired by phenomenology (Creswell 2007). She worked with eight game designers. Participants were chosen to achieve a high level of diversity inside the sample (though probability sampling was not applied) (Pires 1997). Designers working on projects for Nintendo Wii, Nintendo DS, Microsoft Kinect, Facebook, Personal computers, and browser games in Flash were recruited.

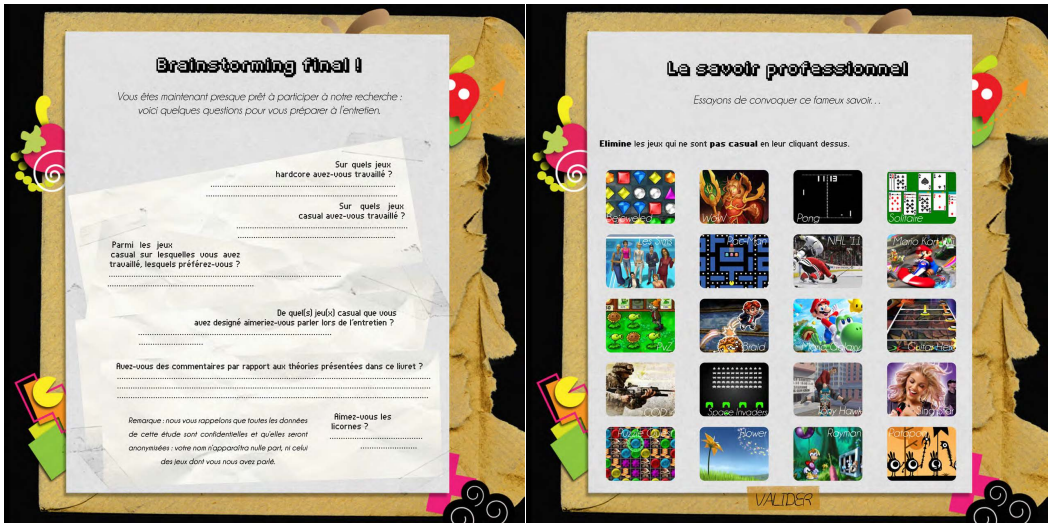


Figure 1: Sensitization Booklet

Data was collected through a two-phase method. First, designers completed a sensitization booklet (an interactive PDF form, see figure 1). The booklet informed them of existing theory on casual games and provoked questions and reactions (Visser F.S. et al. 2005). The notion of professional knowledge was introduced to participants. This was an important step because game designers may not be aware of the value of their own knowledge, since game design is such a young field. The booklet is an application of sensitization theory; "The main objective of sensitizing tools, is to establish self-reflection on the part of the participants, which is harvested during the generative sessions" (Visser F.S. et al. 2005). In short, sensitization stimulated participants by presenting current definitions of casual games, and helped them remember the project they would discuss during the interview. This is important because an interview addressing professional knowledge is different from a traditional interview: **questions did not address a specific part of a casual video game, like the controls, or the fiction. Rather, the goal was to gather concrete examples of participant's work.**

Next, full-length semi-structured interviews (at least an hour each) were conducted with each participant. Interviews centered on a casual game project where the participant was the main designer. Participants provided a *post-mortem* of a casual game project (Goodman, Stolterman, and Wakkary 2011). They were free to talk about any aspect of the project or their experiences they judged relevant. They were prompted to remember unexpected situations or problematic events, and provide a detailed narrative of events. Questions included: "what difficulties did you encounter?"; "what solutions did you achieve?"; "did you do playtests?"; "did you do prototypes?"; and "why?". Following these questions, practitioners were able to remember what they did and comment on it.

All interviews were fully transcribed and analyzed. The author highlighted the fundamental principles of each designer (Schön's constants, see above), and clustered principles by theme using an inductive process. To ensure the reliability of interpretations, results were submitted to participants. Participants commented on the results and their insights were used to discard some misconceptions.

RESULTS

The golden ratio between challenge and skills

The main fundamental principle in participants' practice was challenge. All participants stated that challenge was the core feature of a good game. Participant 4 affirmed that "a game needs a challenge, otherwise it is just a bunch of mechanics" and Participant 8 added that "challenges must be there, otherwise the game dies pretty quickly". Designers were primarily concerned with balancing challenge and the players' skills. This vision of balance can be linked with Csikszentmihalyi's "golden ratio between challenges and skills" (Csikszentmihalyi, 1991, p. 52). In a casual game, the ratio between challenge and player skill must always be perfectly balanced, while this is not necessary in more hardcore games (see figure 2 below).

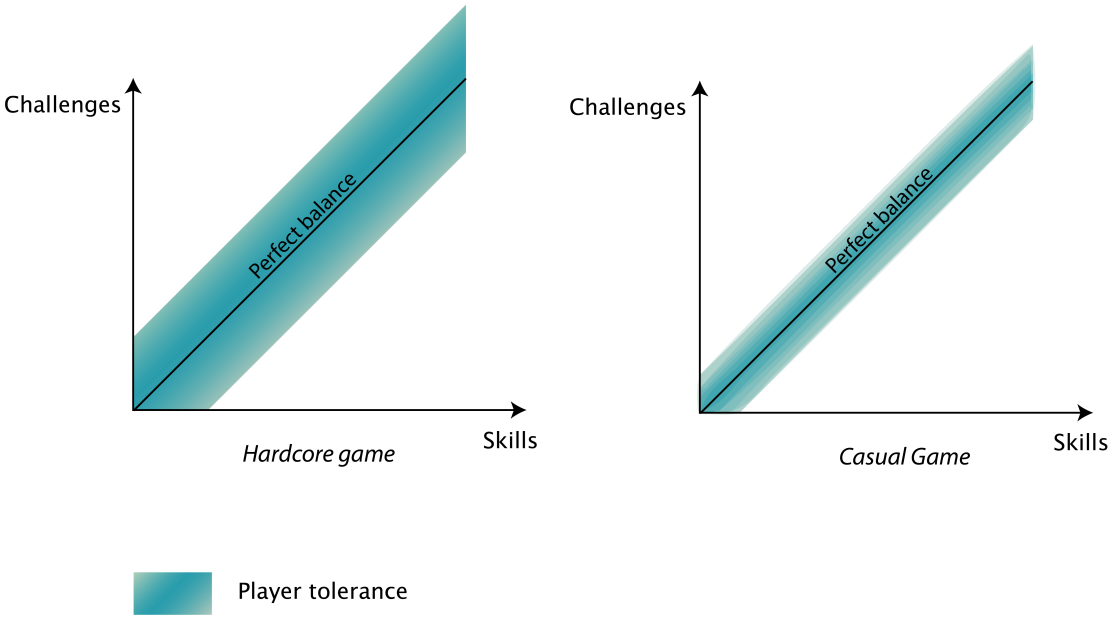


Figure 2: Player tolerance to unbalanced challenges

Participants discussed design solutions that tightly controlled this equilibrium. No designers wanted to lose player in too difficult or too boring segments of their games. Thus, they presented several design solutions to achieve this goal. First, participants explained that a casual game should offer challenge directly suitable to competence. This contrasts with a hardcore game like League of Legends (Riot Games 2009), where the player might spend a month developing their skills. The best way to provide balanced challenge is to progressively introduce different elements of gameplay through in-game, quick and specific tutorials. Designers also apply in-game tips and hints. Finally, participant 3 used "entry points". Entry points link game challenge with pre-existing skills. For example, music games use popular songs as an entry point. Further research on this subject might be valuable, especially to explore ways to assist the player (Therrien forthcoming 2013).

Gameplay loops

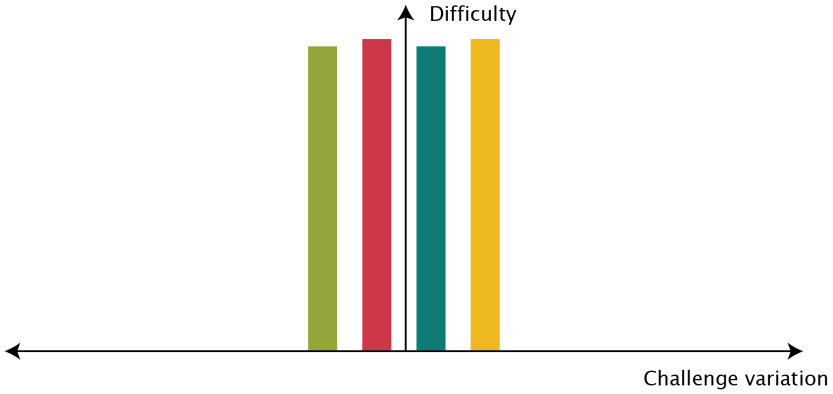
One of the most interesting outcomes of this study was questioning of short play sessions. Participants explained that short play session are incoherent: "Since when players want to open their Wii for five minutes, then close it and say they are satisfied? This is nonsense" (participant 8). Participants argue that play session do not have to be short. Rather, they propose to focus on "gameplay loops". A gameplay loop is a portion of a game containing an objective, a challenge and a reward. For example, participant 4 analyzed a very short gameplay loop in the game *Canabalt (Saltsman 2009)*. The objective in this game is to move forward, the challenge is to jump accurately, and the reward is a visual treat. For the participant, this is an example of a "gameplay micro-loop". Micro-loops allow a very tight control of challenge. The risk of losing the player is low because the game includes a succession of short, well-balanced loops. It is in this perspective that designers implement short gameplay loops, rather than to fit the game into the player's lifestyle.

Challenge was definitely the main value of participants, and was always present in discussions about unexpected design issues. It was used like a compass to find "fun".

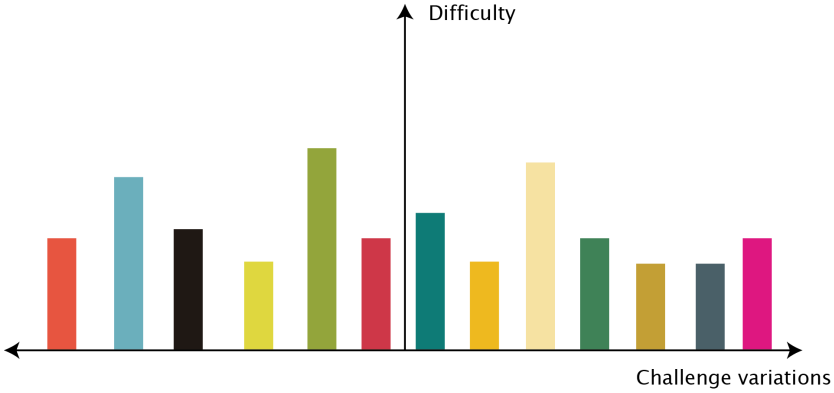
Revisiting progression and difficulty

Progression was another main concern of participants. Participant 3 insisted: "progression is essential for a game". Equilibrium between challenge and skills is dynamic rather than static: it evolves during the game. In many papers, challenge is presented as an evolution and function of difficulty: as the game progresses difficulty increases. However, this traditional vision is increasingly contested. For example, designers of role playing video games "should keep in mind that game challenges are determined by various factors and they cannot be explained solely with difficulty curves" (Bostan and Öğüt 2009, 5). Participants presented a similar vision of difficulty: it is a solution for progression, but variation may be more suitable for casual games. Participants changed the type and style of challenge instead of making the game harder and harder. Moreover, participants explained that difficulty is an over-used solution: they denounced certain games for overusing difficulty and becoming frustrating. Examples include the motorbike challenge in *Grand Theft Auto IV* (Rockstar North 2008). Though participants use difficulty for progression, it is not a central element of their vision.

Challenge variations can develop from different factors. Upgrades were presented as a way to artificially enhances the skill of the player, thus introducing new challenges without making the game more difficult. Another solution was to "re-skin" the same challenge in a different environment (changing the settings). Discovery can also lead player through the game. Participants used fun and unexpected visual rewards or surprising achievements to maintain players' interest. Finally, the social dimension was presented as a way for players to enjoy a game without being directed toward performance. Certain dancing games provide a strong example of this approach: "We just want the player to dance, and since you can't see yourself on the screen, you don't really know how well you are performing, but that's not really important" (participant 4). While reviewing research results, participant 8 concluded that progression can be understood in two ways: it can build on difficulty or on variation. In the first model, even with a variation of challenge, the main way to provide a feeling of progression through the game is by increasing difficulty. In the second model, horizontal progression is built through a wide variety of challenge, but low difficulty. The participant proposed the following graph (figure 3, below).



Progression based upon difficulty



Progression based upon variation

Figure 3: Two visions of progression provided by participant 8.

Finally, participants value originality and innovation. For them, a designer should introduce new mechanics thorough the game. Participant 8 explained this as "design freshness": first, a game should not be to repetitive, new mechanics must sustain the progression; second, a game must be different from other games. Overall, participants were against practices like game cloning (Kotaku 2012, Kuittinen et al. 2007, Juul 2009), and pleaded for creativity in casual games.

Extrinsic values

Progression is complementary to challenge in a game designer's value system. While these values are gameplay-centric, results also indicate some extrinsic values, oriented toward players' experience before and after the game session. Participants indicated that gameplay is not their only concern: they talked about the difficulty of steps before playing, like buying a console, finding and purchasing the game, and creating an account. Participant 1 defines the "entry level" in a way that ties to Kultima and Stenros' steps of "retrieval information," "enabling" and "preparation'. Participant 8 also proposed a game where players can find complementary information on the Internet, and thus expand their experience. The designer provides a complete and delightful experience *in* game and *around* the game.

Fiction and graphics

According to participants, game fiction is a very important element of games: it creates the first impression of the game and is used to promote the game. Participant 1 stressed that "a good video game trailer won't describe the game system like 'press A to jump', but will sell a fantasy; for example 'you are a vampire hunter' ". However, while fiction is critical, it is not a discriminating element to identify casual games. In contrast with literature, participants explained that casual game fiction does not need to be positive. As stated by participant 4, "you don't have to adopt orphans bunnies in flowers explosions". Other participants expressed the desire to explore traditional hardcore themes, like science fiction, in casual games.

The graphic style is also important. One participant explained that it can "help to sell an interaction". Good art direction is as valuable in casual games as in hardcore games. However, graphic style is not an essential criterion in the definition of casual games. Some participants used cute elements and colored settings in their games, but none presented this as a mandatory element for casual games.

DISCUSSION

The objective of this study was to further the definition of casual games, and clarify contested aspects in game culture including the importance of challenge, difficulty, length of play session and fiction. To achieve this goal, research addressed casual game design practice. Interviews allowed designers to thoughtfully explain their practice though the reflective practitioner approach. Participants were free to explore their own practice without any restrictive themes.

Many results were unexpected: while the author anticipated that new values would be introduced through discussions, the main concerns indicted by participants were about challenges and progression, rather traditional notions. However, these concepts require expanding and re-working. As a matter of fact, challenge must be revisioned. Kultima (2009) questioned challenge, and appears to discard the concept. She explored whether casual games need to be "highly challenging", and underlined how casual game experience differs from hardcore games. The term "highly" is the key of this analysis. If Kultima means that games do not need challenge, then this study's findings oppose her argument. However, if highly challenging refers to a progression based on overwhelming difficulty, then these results are in accordance with her argument. Casual games need to be challenging and can be somewhat difficult, but not "highly" difficult. Progression must be carefully crafted and cannot rest solely on difficulty. Research results indicate that variation of challenges is necessary to achieve this goal. Moreover, "difficulty" is not a game value, it is a design solution. Rather than talking about the game in general, participants pointed to particular mechanics when talking about difficulty. Additional research is required to fully explore the impact of difficulty in games, especially in casual games. Participants evoked Kultima's design values (acceptability, accessibility, simplicity and flexibility), but their appreciative system and their design solutions were clearly centered on challenge and progression. The main objective of the designer is "fun" rather than accessibility. Certain design solutions, like entry points, can be classified as "accessibility solutions", but they were presented as tools to provide a well-balanced challenge. The main interests of Kultima's values were their dramatic opposition to hardcore values, but the opposition between casual and hardcore games seems to fade. Conversely, participants did not always see a clear distinction between casual games and hardcore games. Certain participants even believed that this opposition will be discarded in the near future. Further, they stressed that casual game design can

inform hardcore game design. Casual games are not a sweetened version of hardcore games, and must be taken seriously. Participants argued for serious reconsideration of casual game design.

This reconsideration brings the second part of the discussion, concerning some assertions made about casual game that take a totally different meaning when enlighten by game designers' professional knowledge. First, the questioning of short play sessions is demystified. The real question should be about the best way to provide a well-balanced challenge rather than the amount of time a player spends in front of game. Short gameplay loops support tight control of challenges, and therefore are frequent in casual games. Shorts loops enable short play sessions, but do not necessitate them. Consequently, short play sessions are a side-effect of short gameplay loops, and are not a typical feature of casual games. Moreover, casual, mobile and social games have sometimes been considered a single group of games, which could explain the many different visions of play sessions indicated in the literature review. The arrival of hardcore games on mobile platforms shows that we need to stay alert about new trends. Precision and care must be applied when using those terms. Second, while all scholars agree that positive fiction is an attribute of casual games, especially Juul (2009), participants rejected this candy-coated vision. This is the clearer divergence between these present research findings and previous literature. Once again, the term "casual game" covers such a wide selection of game that a single graphic style or narrative theme cannot account for the variety of game produced.

This discussion underlined a paradox: on one hand, casual games should not be confused with mobile or social games and the term 'casual games' should be used in a very specific way. On the other hand, the vast number of games makes classifying casual games a challenge. It is tempting to apply broad criteria and thus associate games which do not belong together. This study has shown that challenge and progression, while complex notions, might be more appropriate criteria to differentiate casual from hardcore games than fiction or graphic style criteria.

Moreover, a deeper understanding of designer practices is necessary to support the development of more comprehensive definitions. We need to consider different design practices (for example companies where designers avoid cloning games, and emphasize creativity and quality in their everyday work) if we are to avoid more pejorative definitions. The development of future definitions would benefit from a systemic approach encompassing the complexity of casual games and to integrate games, gamers and designers.

CONCLUSION

The aim of this study was to provide a new understanding and perspective of definitions for casual games. It showed some current claims about casual games are subject to debate. The game landscape is changing very rapidly, and scholars need to be careful when building theory in dynamic areas such as casual games. Definitions of the term "casual games" no longer appear to match the reality of the field. Using a different framework to build a more comprehensive vision of casual games is a work in progress, and we should not take our current understandings as final.

Professional knowledge of game designers has not been thoroughly explored to date, and this study is an initial step in this direction. By adopting a framework external to game studies, this study participates in *fragging* game design discipline. However, this external perspective has produced valuable results, and has potential to contribute to more well-rounded discipline and theory. Casual games require a fundamental reworking of former game concepts in light of new practices. Further research is required to explore game designers' practices.

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ENDNOTES

[1] See Chiapello (2012) for more information about the constants and application of the reflective practitioner model.

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